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PATENT

Attorney Reference Number 4239-50420  
Application Number 09/125,635

determining whether the compound binds to the polypeptide,  
wherein binding of the compound to the polypeptide indicates that the compound inhibits  
ER-dependent transcription.

3 <sup>3</sup> 16. (Amended) The method of claim <sup>2</sup> 14, wherein the AIB1 polypeptide comprises an  
amino acid sequence as set forth as SEQ ID NO: 2.

72 4 <sup>4</sup> 16. (Amended) The method of claim <sup>2</sup> 14, wherein the AIB1 polypeptide comprises an  
amino acid sequence as set forth as SEQ ID NO: 3.

*Please cancel claim 17.*

73 18. (Amended) A method of identifying a candidate compound which inhibits  
estrogen receptor-dependent transcription comprising:  
contacting the AIB1 polypeptide of claim 12 and an estrogen receptor polypeptide with  
the compound and  
determining the ability of the compound to interfere with the binding of the estrogen  
receptor polypeptide with the AIB1 polypeptide,  
wherein interference of the binding of the estrogen receptor polypeptide and the AIB1  
polypeptide indicates the compound inhibits estrogen receptor dependent transcription.

19. (Amended) The method of claim 18, wherein the AIB polypeptide further  
comprises SEQ ID NO: 2 or a conservative variant thereof.

20. (Reiterated) The method of claim 18, wherein the AIB polypeptide further  
comprises SEQ ID NO: 3 or a conservative variant thereof.

*Please cancel claims 21-54, without prejudice.*

SAS:sas 11/27/02 154763.doc  
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8 ~~55~~. (Twice Amended) An isolated DNA comprising a sequence encoding a AIB1 polypeptide comprising SEQ ID NO: 8, wherein the polypeptide acts as co-activator of an estrogen receptor.

74 9 ~~56~~. (Twice Amended) The isolated DNA of claim ~~55~~<sup>8</sup>, wherein the AIB1 polypeptide is a human AIB1 polypeptide.

10 ~~57~~. (Twice Amended) The isolated DNA of claim ~~55~~<sup>8</sup>, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4.

11 ~~58~~. (Twice Amended) The isolated DNA of claim ~~55~~<sup>8</sup>, wherein the polypeptide further comprises the amino acid sequence of SEQ ID NO: 2.

12 ~~59~~. (Twice Amended) The isolated DNA of claim ~~55~~<sup>8</sup>, wherein the AIB1 polypeptide further comprises the amino acid sequence of SEQ ID NO: 3.

Please cancel claim 60.

61. (Twice Amended) The isolated DNA of claim 55 comprising a polynucleotide which hybridizes under high stringency conditions to a DNA having the sequence of SEQ ID NO: 1, or the complement thereof, wherein the polynucleotide has at least 90% sequence identity to SEQ ID NO: 1.

75 62. (Twice Amended) The isolated DNA of claim 55 comprising a polynucleotide sequence having at least 90% sequence identity to SEQ ID NO: 1.

Dist G4 63. (Twice Amended) The isolated DNA of claim 55 comprising (a) the sequence of SEQ ID NO: 1 or (b) a degenerate variant thereof.

14 ~~64~~. (Twice Amended) The isolated DNA of claim ~~55~~<sup>8</sup>, operably linked to a promoter.

SAS:sas 11/27/02 154763.doc  
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Application Number 09/125,635

15 ~~65~~ (Amended) An isolated host cell comprising the DNA of claim ~~55~~<sup>8</sup>.

75 { 66. (Amended) An isolated polypeptide comprising SEQ ID NO: 2 or a conservative variant thereof.

67. (Amended) An isolated polypeptide comprising SEQ ID NO: 3 or a conservative variant thereof

68. (Amended) An isolated polynucleotide having at least 75% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

16 ~~69~~ (Amended) An isolated polynucleotide having at least 90% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

Please add the following new claims:

17 ~~70~~ (New) The isolated polypeptide of claim ~~12~~<sup>1</sup>, wherein the polypeptide further comprises SEQ ID NO: 2.

18 ~~71~~ (New) The isolated polypeptide of claim ~~12~~<sup>1</sup>, wherein the polypeptide further comprises SEQ ID NO: 3.

76 19 ~~72~~ (New) The isolated polypeptide of claim ~~70~~<sup>17</sup>, wherein the polypeptide further comprises SEQ ID NO: 3.

20 ~~73~~ (New) The isolated polypeptide of claim ~~12~~<sup>1</sup>, wherein the polypeptide comprises SEQ ID NO: 4.

SAS:sas 11/27/02 154763.doc  
PATENTAttorney Reference Number 4239-50420  
Application Number 09/125,635

21-65 74. (New) An isolated polypeptide fragment of SEQ ID NO: 4, wherein the polypeptide fragment binds the estrogen receptor.

75. (New) An isolated polypeptide fragment of SEQ ID NO: 4 encoding an antigenic epitope, wherein antibodies that bind SEQ ID NO: 4 bind the polypeptide fragment.

22 76. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 74.

77. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 75.

23 78. (New) An isolated nucleic acid sequence encoding the polypeptide of claim 73.

24 76 79. (New) The isolated nucleic acid encoding the of claim 62, wherein the nucleic acid comprises a sequence set forth as SEQ ID NO: 1.

80. (New) The isolated polypeptide of claim 12, wherein the polypeptide comprises the amino acid sequence of SEQ ID NO: 4 or a conservative variant thereof, wherein the polypeptide specifically binds an estrogen receptor.

25 81. (New) An isolated polynucleotide comprising a sequence set forth as SEQ ID NO: 1, a degenerate variant thereof, or the complement thereof.

82. (New) An isolated polynucleotide comprising a fragment of SEQ ID NO: 1 or the complement thereof of sufficient length to hybridize to SEQ ID NO: 1 or the complement thereof.

26 83. (New) The isolated polynucleotide of claim 16, wherein the polynucleotide has at least 95% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

SAS:sas 11/27/02 154763.doc  
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27 ~~84~~. (New) The isolated polynucleotide of claim ~~69~~<sup>16</sup>, wherein the polynucleotide has at least 98% homology to SEQ ID NO: 1, wherein the polynucleotide encodes a polypeptide that acts as a co-activator of an estrogen receptor.

28 ~~85~~. (New) An isolated polypeptide encoded by the polynucleotide of claim ~~83~~<sup>26</sup>.

76 29 ~~86~~. (New) An isolated polypeptide encoded by the polynucleotide of claim ~~84~~<sup>27</sup>.

Ent 67 87. (New) The isolated DNA of claim 61, wherein high stringency conditions comprise hybridization at about 42 °C and about 50% formamide, a first wash at 65 °C, about 2X SSC and 1% SDS; followed by a second wash at about 65 °C and about 0.1 X SSC.--

#### REMARKS

Claims 12, 13, 15-16, 18-19, 55-69 are amended herein. Claims 17, 21-54, and 60 are canceled herein, without prejudice to renewal. New claims 70-87 are added herein.

Support for the amendment of claims 12 and 55-69 can be found throughout the specification, specifically on page 6, line 31 to page 7, line 1, page 8, lines 16-25, page 14, line 19 to page 15, line 10. Support for the amendment of claim 13 can be found throughout the specification, specifically on page 6, lines 22-25, page 7, line 10, and on page 8, lines 23-24. Support for the amendments of claims 15-16 can be found in the specification on page 7, lines 1-9. Claim 18 is amended to correct form, as supported in the specification on page 6, line 23 and on page 8, lines 26-37. Claim 19 is amended to correct a typographical error, which corrects the form of the claim. Support for new claims 70-72 can be found in the specification on page 7, lines 1-10. Support for new claim 73 can be throughout the specification, specifically on page 8, line 25. Support for new claims 74-75 can be found throughout the specification specifically on page 8, lines 24-35, and on page 10, lines 5-26. Support for new claims 76-79 can be found throughout the specification, specifically on page 7, line 29 to page 8, line 25, and on page 10, lines 5-26. Support for new claim 80 can be found throughout the specification, specifically on page 8, lines 33-36. Support for new claims 81-82 can be found in the specification on page 7, line 29 to page 8, line 21, page 10, lines 33-36, page 12, lines 4-19, page 15, line 28 to page 16,